



[illegible]

(2) 49  
(3) 69  
(4) 99

HISTORY ; Detailed Current Edit History  
DECLARATIONS  
LIB\$ICHAR - Return first char of string as INTEGER\*4 value

```
0000 1 .TITLE LIB$ICHAR ; Return first char of string as value
0000 2 .IDENT /1-006/ ; File: LIB$ICHAR.MAR Edit:RKR1006
0000 3
0000 4
0000 5 *****
0000 6 *
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0000 24 *
0000 25 *
0000 26 *****
0000 27
0000 28
0000 29 FACILITY: General Utility Library
0000 30 ++
0000 31 ABSTRACT:
0000 32
0000 33 Return first character of a string as INTEGER*4 ASCII value.
0000 34
0000 35 --
0000 36
0000 37 VERSION: 1-001
0000 38
0000 39 HISTORY:
0000 40
0000 41 AUTHOR:
0000 42 Thomas N. Hastings, 6-Aug-77: Version 0
0000 43
0000 44 MODIFIED BY:
0000 45
0000 46
0000 47
```



```
0000 49      .SBTTL HISTORY      ; Detailed Current Edit History
0000 50
0000 51
0000 52 : Edit History for Version 0
0000 53 :
0000 54
0000 55 : 1-001 - Update copyright notice and version number. The last edit
0000 56 :          number on version 0 was 3. JBS 16-NOV-78
0000 57 : 1-002 - Add "" to PSECT directive. JBS 21-DEC-78
0000 58 : 1-003 - Add support for 0 length dynamic strings. RW 16-AUG-79
0000 59 : 1-004 - Enhance to allow recognition of additional classes of
0000 60 :          string descriptors by using LIB$ANALYZE_SDESC_R3 to extract
0000 61 :          length and address of 1st byte of data from descriptor.
0000 62 :          RKR 20-MAY-1981
0000 63 : 1-005 - Add special-case code to process string descriptors that
0000 64 :          "read" like fix string descriptors. RKR 7-OCT-1981.
0000 65 : 1-006 - Redirect jsb's from LIB$ANALYZE_SDESC_R3 to
0000 66 :          LIB$ANALYZE_SDESC_R2. Drop R3 from entry mask.
0000 67 :          RKR 18-NOV-1981.
```

```
0000 69      .SBTTL  DECLARATIONS
0000 70
0000 71 ::
0000 72 :: INCLUDE FILES: NONE
0000 73 ::
0000 74
0000 75 ::
0000 76 :: EXTERNAL SYMBOLS:
0000 77 ::
0000 78      .DSABL  GBL      ; no default externals
0000 79      .EXTRN  LIB$ANALYZE_SDESC_R2 ; extract length and address
0000 80
0000 81 ::
0000 82 :: MACROS:
0000 83 ::
0000 84      $DSCDEF      ; for fields within a descriptor
0000 85
0000 86 ::
0000 87 :: PSECT DECLARATIONS:
0000 88 ::
00000000 89      .PSECT  _LIB$CODE PIC,SHR,LONG,EXE,NOWRT
0000 90 ::
0000 91 :: EQUATED SYMBOLS: NONE
0000 92 ::
0000 93 ::
0000 94 ::
0000 95 :: OWN STORAGE: NONE
0000 96 ::
0000 97
```

```
0000 99 .SBTTL LIB$ICCHAR - Return first char of string as INTEGER*4 value
0000 100
0000 101 :++
0000 102 : FUNCTIONAL DESCRIPTION:
0000 103 :
0000 104 : Return first character of string as INTEGER*4 8-bit ASCII value.
0000 105 : If the string is a null string, ie. the length is 0, return a
0000 106 : null.
0000 107 :
0000 108 : CALLING SEQUENCE:
0000 109 :
0000 110 : First_char_val.wlu.v = LIB$ICCHAR (string.rt.dx)
0000 111 :
0000 112 : string = 4 ; Adr. of string descriptor
0000 113 :
0000 114 :
0000 115 : INPUT PARAMETERS:
0000 116 : NONE
0000 117 :
0000 118 : IMPLICIT INPUTS:
0000 119 : NONE
0000 120 :
0000 121 : OUTPUT PARAMETERS:
0000 122 : NONE
0000 123 :
0000 124 : IMPLICIT OUTPUTS:
0000 125 : NONE
0000 126 :
0000 127 : ROUTINE VALUE
0000 128 : FIRST_CHAR_VAL.wlu.v value of 1st char as a INTEGER*4
0000 129 :
0000 130 : SIDE EFFECTS:
0000 131 : NONE
0000 132 :
0000 133 :--
0000 134 :
0000 135 :
0000 136 :
0000 137 : .ENTRY LIB$ICCHAR, ^M<R2> ; entry mask
50 04 AC D0 0002 138 : MOVL STRING(AP), R0 ; address of string descriptor
02 03 A0 91 0006 139 : CMPB DSC$B_CLASS(R0), #DSC$K_CLASS_D ; read like fixed ?
50 04 BC 7D 000A 140 : BGTRU 1$ ; no
50 04 BC 7D 000C 141 : MOVQ @STRING(AP), R0 ; length->R0, address->R1
50 15 B5 0010 142 : TSTW R0 ;
50 61 9A 0012 143 : BLEQU 10$ ; if negative
0000 04 0014 144 : MOVZBL (R1), R0 ; value of 1st character
0000 04 0017 145 : RET
0000 0018 146 :
00000000'GF 16 0018 147 1$: JSB G^LIB$ANALYZE_SDESC_R2 ; extract: length->R1, addr->R2
08 50 E9 001E 148 : BLBC R0, 10$ ; if not success, quit
50 51 B5 0021 149 : TSTW R1 ; length 0 ?
50 04 1B 0023 150 : BLEQU 10$ ; if so, return a null
50 62 9A 0025 151 : MOVZBL (R2), R0 ; value of 1st character
0000 04 0028 152 : RET ; return from LIB$ICCHAR
50 50 D4 0029 153 :
0000 04 002B 154 10$: CLRL R0 ; return a null
0000 04 002B 155 : RET
```

```

; Return first char of string as value      H 14
LIB$ICHAR - Return first char of string     16-SEP-1984 00:09:55 VAX/VMS Macro V04-00    Page   5
                                           6-SEP-1984 11:08:02 [LIBRTL.SRC]LIB$ICHAR.MAC;1 (4)

002C    156
002C    157          .END                      ; End of module LIB$ICHAR

```



LIB\$ICHAR  
Symbol table

I 14  
; Return first char of string as value

16-SEP-1984 00:09:55 VAX/VMS Macro V04-00  
6-SEP-1984 11:08:02 [LIBRTL.SRC]LIBICHAR.MAR;1

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(4)

DSC\$B\_CLASS = 00000003  
DSC\$K\_CLASS\_D = 00000002  
LIB\$ANALYZE\_SDESC\_R2 \*\*\*\*\* X 00  
LIB\$ICHAR 00000000 RG 02  
STRING = 00000004

+-----+  
! Psect synopsis !  
+-----+

PSECT name	Allocation	PSECT No.	Attributes
. ABS .	00000000 ( 0.)	00 ( 0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
\$ABSS	00000000 ( 0.)	01 ( 1.)	NOPIC USR CON ABS LCL NOSHR EXE RD WRT NOVEC BYTE
_LIB\$CODE	0000002C ( 44.)	02 ( 2.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

+-----+  
! Performance indicators !  
+-----+

Phase	Page faults	CPU Time	Elapsed Time
Initialization	29	00:00:00.02	00:00:02.01
Command processing	113	00:00:00.34	00:00:02.90
Pass 1	132	00:00:01.12	00:00:03.71
Symbol table sort	0	00:00:00.10	00:00:00.11
Pass 2	41	00:00:00.30	00:00:02.59
Symbol table output	2	00:00:00.01	00:00:00.01
Psect synopsis output	3	00:00:00.01	00:00:00.01
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	322	00:00:01.91	00:00:11.34

The working set limit was 900 pages.  
7877 bytes (16 pages) of virtual memory were used to buffer the intermediate code.  
There were 10 pages of symbol table space allocated to hold 134 non-local and 2 local symbols.  
157 source lines were read in Pass 1, producing 13 object records in Pass 2.  
8 pages of virtual memory were used to define 7 macros.

+-----+  
! Macro library statistics !  
+-----+

Macro library name	Macros defined
_\$255\$DUA28:[SYSLIB]STARLET.MLB;2	4

190 GETS were required to define 4 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LISS:LIBICHAR/OBJ=OBJ\$:LIBICHAR MSRCS:LIBICHAR/UPDATE=(ENHS:LIBICHAR)



0207 AH-BT13A-SE  
VAX/VMS V4.0

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LIS

LIBGETFOR  
LIS

LIBGETINP  
LIS

LIBINISHR  
LIS

LIBGETDVI  
LIS

LIBGETOPC  
LIS

LIBFNDING  
LIS

LIBGETMSG  
LIS

LIBINDEX  
LIS

LIBINSQHI  
LIS

LIBGETUP1  
LIS

LIBGETTAB  
LIS